

**LPDES PERMIT NO. LA0123960 (Agency Interest No. 147551)**

**LPDES STATEMENT OF BASIS  
FOR THE DRAFT LOUISIANA POLLUTANT DISCHARGE ELIMINATION SYSTEM  
(LPDES) PERMIT TO DISCHARGE TO WATERS OF LOUISIANA**

- I. Company/Facility Name:** REG Destrehan, LLC  
REG Inc., St. Rose  
P.O. Box 626  
Carroll, LA 70631
- II. Issuing Office:** Louisiana Department of Environmental Quality (LDEQ)  
Office of Environmental Services  
Water Permits Division  
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Baton Rouge, Louisiana 70821-4313
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**Date Prepared:** May 15, 2008

LAC 33:IX Citations: Unless otherwise stated, citations to LAC 33:IX refer to promulgated regulations listed at Louisiana Administrative Code, Title 33, Part IX.

40 CFR Citations: Unless otherwise stated, citations to 40 CFR refer to promulgated regulations listed at Title 40, Code of Federal Regulations in accordance with the dates specified at LAC 33:IX.4901, 4903, and 2301.F.

**IV. Permit Action/Status:**

**A. Reason For Permit Action:**

First time issuance of a Louisiana Pollutant Discharge Elimination System (LPDES) permit for a 5-year term following regulations promulgated at LAC 33:IX.2711/40 CFR 122.46.

In order to ease the transition from NPDES to LPDES permits, dual regulatory references are provided where applicable. The LAC references are the legal references while the 40 CFR references are presented for informational purposes.

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only. In most cases, LAC language is based on and is identical to the 40 CFR language. 40 CFR Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903 and will not have dual references. In addition, state standards (LAC 33:IX, Chapter 11) will not have dual references.

- B. LPDES permit: Initial permit
- C. Application received date: November 8, 2007

**V. Facility Information:**

- A. Location – 11842 River Road, St. Rose, St. Charles Parish (Latitude 29°56'25", Longitude 90°19'30").
- B. Applicant Activity -

REG Destrehan, LLC is a proposed biodiesel manufacturing facility. Biodiesel will be produced by a chemical process called transesterification. During the process, the refined feedstock (vegetable oils) will be mixed with methanol and a catalyst (sodium methylate). The oil molecules (triglycerides) are broken apart and reformed into methylesters (biodiesel) and glycerin, which are then separated from each other and purified. Process wastewater is generated in the oil purification and product separation steps. Normally, sanitary wastewaters are treated in a membrane bioreactor system along with process wastewaters and discharged to the cooling tower sump (after treatment) and reused. However, on occasion, all treated wastewaters from the bioreactor will be discharged to the Mississippi River via Outfall 001. Cooling tower blowdown, boiler blowdown and water softener regeneration waters are sent to a holding basin and discharged to a ditch (Outfall 002) that discharges to the LaBranche wetlands.

- C. Technology Basis - (40 CFR Chapter 1, Subchapter N/Parts 401, 405-415, and 417-471 have been adopted by reference at LAC 33:IX.4903)

In recent years, biodiesel production has been classified under SIC Code 2869 – organic chemical manufacturing. Organic chemical manufacturing is generally covered under the Organic Chemicals, Plastics, and Synthetic Fibers (OCPSF) Guideline at 40 CFR 414. However, in accordance with the General Provisions located at 40 CFR 414, Subpart A, the provisions of those guidelines do not apply to any process wastewater discharges from the manufacture of organic chemical compounds solely by the extraction from plant and animal raw materials. Since the

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discharges from REG Destrehan, LLC would fall under this category, the OCPSF Guidelines are not applicable. See Section VIII below for justification of permit limitations.

Other sources of technology based limits:

LDEQ Stormwater Guidance, letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6).  
Best Professional Judgement

- D. Fee Rate -
1. Fee Rating Facility Type: Minor
  2. Complexity Type: II (the complexity type has been assigned on a BPJ basis due to type of processes that take place at the facility)
  3. Wastewater Type: II
  4. SIC code: 2869

**VI. Receiving Waters:** Mississippi River (Outfall 001), and local drainage thence to the LaBranche Wetlands (Outfalls 002, 003, 004, 005, 006 and 007)

Mississippi River:

- A. River Basin: Mississippi River, Segment No.: 070301  
B. Designated Uses: primary contact recreation, secondary contact recreation, fish and wildlife propagation, and drinking water supply

Local drainage thence to the LaBranche Wetlands:

- A. River Basin: Lake Pontchartrain, Segment No.: 041001  
B. Designated Uses: primary contact recreation, secondary contact recreation, fish and wildlife propagation

**VII. Outfall Information:**

Outfall 001

- A. Type of wastewater – The intermittent discharge of treated process wastewater and sanitary wastewater

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- B. Location – At the point of discharge from the header of the wastewater treatment system prior to discharge to the Mississippi River, or prior to being routed to the cooling tower sump (Latitude 29°56'52", Longitude 90°19'42").
- C. Treatment – Membrane bioreactor (activated sludge)
- D. Flow – Intermittent, Approximately 0.0086 MGD
- E. Receiving waters – Mississippi River (The wastewaters from Outfall 001 may also be routed to the cooling tower sump which subsequently discharges via Outfall 002 to local drainage thence to the LaBranche Wetlands)
- F. Basin and segment – Mississippi River Basin, Segment 070301 or Lake Pontchartrain Basin, Segment 041001

Outfall 002

- A. Type of wastewater – The intermittent discharge of previously monitored effluent from Internal Outfalls 102, 202, 302, 402 and 502, sheet flow runoff from non-process areas at the REG site, and previously monitored stormwater runoff authorized under IMTT's LPDES permit (LA0075833)
- B. Location – At the outlet pipe on the northeast corner of the REG property
- C. Treatment – None
- D. Flow – Intermittent, Approximately 0.074 MGD
- E. Receiving waters – local drainage thence to the LaBranche Wetlands
- F. Basin and segment – Lake Pontchartrain Basin, Segment 041001

Outfall 102

- A. Type of wastewater – The intermittent discharge of cooling tower blowdown, boiler blowdown, water softener regeneration, and stormwater runoff
- B. Location – At the end of the discharge pipe from the non-contact water basin prior to mixing with other waters (Latitude 29°56'54", Longitude 90°19'41").

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- C. Treatment – None
- D. Flow – Intermittent, Approximately 0.042 MGD
- E. Receiving waters – local drainage thence to the LaBranche Wetlands
- F. Basin and segment – Lake Pontchartrain Basin, Segment 041001

Outfall 202

- A. Type of wastewater – The intermittent discharge of stormwater runoff
- B. Location – At the end of the discharge pipe from the tank farm prior to mixing with other waters
- C. Treatment – None
- D. Flow – Intermittent, Approximately 0.0046 MGD
- E. Receiving waters – local drainage thence to the LaBranche Wetlands
- F. Basin and segment – Lake Pontchartrain Basin, Segment 041001

Outfall 302

- A. Type of wastewater – The intermittent discharge of stormwater runoff
- B. Location – At the pipe on the east end of the South Ditch prior to mixing with other waters
- C. Treatment – None
- D. Flow – Intermittent, Approximately 0.00076 MGD
- E. Receiving waters – local drainage thence to the LaBranche Wetlands
- F. Basin and segment – Lake Pontchartrain Basin, Segment 041001

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Outfall 402

- A. Type of wastewater – The intermittent discharge of stormwater runoff
- B. Location – At the pipe on the east end of the Central Ditch prior to mixing with other waters
- C. Treatment – None
- D. Flow – Intermittent, Approximately 0.00076 MGD
- E. Receiving waters – local drainage thence to the LaBranche Wetlands
- F. Basin and segment – Lake Pontchartrain Basin, Segment 041001

Outfall 502

- A. Type of wastewater – The intermittent discharge of stormwater runoff
- B. Location – At the pipe on the east end of the North Ditch prior to mixing with other waters
- C. Treatment – None
- D. Flow – Intermittent, Approximately 0.013 MGD
- E. Receiving waters – local drainage thence to the LaBranche Wetlands
- F. Basin and segment – Lake Pontchartrain Basin, Segment 041001

**VIII. Proposed Permit Limits and Rationale:**

The specific effluent limitations and/or conditions will be found in the draft permit. Development and calculation of permit limits are detailed in the Permit Limit Rationale section below.

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A. PROPOSED PERMIT LIMITS

**Outfall 001 – Process wastewater and sanitary wastewater**

Parameter	Proposed Permit Limitations		Monitoring Freq.	Rationale
	Monthly Avg mg/l	Daily Max mg/l		
Flow – MGD	Report	Report	1/month	LAC 33:IX.2707.I.1.b.
TOC	---	Report	1/month	BPJ, similar permitted facility
Oil & Grease	15	30	1/month	BPJ, similar permitted facility
BOD	30	45	1/month	BPJ, similar permitted facility
TSS	30	45	1/month	BPJ, LAG530000
Fecal Coliform	200	400	1/quarter	BPJ, LAG530000
pH	6.0 (min)	9.0 (max)	1/month	LAC 33:IX.1113.C.1

**EFFLUENT LIMITATIONS BASIS:**

**Flow:** The requirement to report flow is based upon LAC 33:IX.2707.I.1.b.

**TOC, Oil & Grease and BOD:** Limitations and monitoring requirements are based upon BPJ and a similar permitted facility (LA0047546). Only one similar facility was found in the State of Louisiana. After review of DMR data for REG Destrehan, LLC and DMR data from similar facilities, this Office may revise these established limits upon reissuance of the permit if it is determined that different limitations or parameters are more appropriate.

**TSS and Fecal Coliform:** Limitations for TSS and Fecal Coliform are based upon the Class I Sanitary General Permit (LAG530000).

**pH:** Requirements are based upon LAC 33:IX.1113.C.1.

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**Outfall 002** - Previously monitored effluent from Outfalls 102, 202, 302 402 and 502, sheet flow runoff from non-process areas at the REG site, and previously monitored stormwater runoff authorized under IMTT's LPDES permit (LA0075833)

**Outfall 202** – Stormwater runoff

**Outfall 302** – Stormwater runoff

**Outfall 402** – Stormwater runoff

**Outfall 502** – Stormwater runoff

Parameter	Proposed Permit Limitations		Monitoring Freq.	Rationale
	Monthly Avg mg/l	Daily Max mg/l		
Flow – MGD	Report	Report	1/quarter	LAC 33:IX.2707.I.1.b.
TOC	---	50	1/quarter	BPJ, LDEQ Stormwater Guidance
Oil & Grease	---	15	1/quarter	BPJ, LDEQ Stormwater Guidance
pH	6.0 (min)	9.0 (max)	1/quarter	LAC 33:IX.1113.C.1

**EFFLUENT LIMITATIONS BASIS:**

**Flow:** The requirement to report flow is based upon LAC 33:IX.2707.I.1.b.

**TOC and Oil & Grease:** Limitations are based upon BPJ and LDEQ's stormwater guidance [letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)].

**pH:** Requirements are based upon LAC 33:IX.1113.C.1.



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**Outfall 102** – Cooling tower blowdown, boiler blowdown, water softener regeneration, and stormwater runoff

Parameter	Proposed Permit Limitations		Monitoring Freq.	Rationale
	Monthly Avg mg/l	Daily Max mg/l		
Flow – MGD	Report	Report	1/month	LAC 33:IX.2707.1.1.b.
TOC	---	50	1/month	BPJ, LDEQ Stormwater Guidance
Oil & Grease	---	15	1/month	BPJ, LDEQ Stormwater Guidance
pH	6.0 (min)	9.0 (max)	1/month	LAC 33:IX.1113.C.1

**EFFLUENT LIMITATIONS BASIS:**

**Flow:** The requirement to report flow is based upon LAC 33:IX.2707.1.1.b.

**TOC and Oil & Grease:** Limitations are based upon BPJ and LDEQ's stormwater guidance [letter dated 6/17/87, from J. Dale Givens (LDEQ) to Myron Knudson (EPA Region 6)].

**pH:** Requirements are based upon LAC 33:IX.1113.C.1.

**B. MONITORING FREQUENCIES**

The monitoring frequencies established at all outfalls are considered adequate for the protection of the receiving water and its designated uses. These frequencies are also consistent with similarly permitted discharges at other facilities and have been applied based on Best Professional Judgment.

**IX. Compliance History/DMR Review:**

N/A – REG Destrehan, LLC /REG Inc., St. Rose is a proposed site. Therefore, there is no compliance history available.